

# Mineral Industry Surveys

#### For information, contact:

Daniel Edelstein, Copper Commodity Specialist U.S. Geological Survey 989 National Center Reston, VA 20192

Telephone: (703) 648-4978, Fax: (703) 648-7757

E-mail: dedelste@usgs.gov

Hema Edupuganti (Data) Telephone: (703) 648-7951 Fax: (703) 648-8975

E-mail: hedupuganti@usgs.gov

**Internet:** http://minerals.usgs.gov/mineral

#### **COPPER IN MARCH 2003**

Mine, smelter, and refinery production during the first quarter of 2003 were down by about 6%, 25%, and 7%, respectively, compared with production during the first quarter of 2002. The large discrepancy between the declines in mine and smelter production reflects the temporary smelter shut down at Kennecott Utah Copper (Copper in February 2002), an increase in the proportion of mine production from electrowon copper, reduced inventories of concentrates on which to draw, and reduced imports of copper in concentrate. Copper concentrate imports fell from 20,100 metric tons (t) copper content during the first quarter of 2002 to 4,940 t in the first quarter of 2003. Also, an increase in anode imports from 34,400 during the first quarter of 2002 to 41,900 during the first quarter of 2003 helped to support refined copper production.

On March 3, Superior TeleCom Inc., parent to SUPERIOR ESSEX (formerly Essex International), announced that it had filed a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. Superior TeleCom is the third largest U.S. copper cable and wire rod manufacturer, primarily producing telecommunications wire and cable and magnet wire for motors, transformers, etc. Under Chapter 11 protection, Superior TeleCom plans to implement a reorganization of its capital structure with the intent of reducing debt and interest costs and providing increased financial flexibility. The company also announced that it had obtained a \$100 million financing facility from lenders within its current banking group to provide sufficient liquidity during restructuring. The company attributed the need for restructuring to a sustained downturn in telecom markets, particularly from their traditional local telephone company customers for communications cable products used in the local loop, and the continued lack of a "visibly strong economic recovery" (Superior TeleCom, Inc., 2003).

According to a company letter sent to employees, Superior TeleCom believes its underlying business is sound and has a positive cash flow. According to industry reports, the move came as no surprise and many vendors were already operating on a cash only basis. Some suppliers of raw materials, however, including Phelps Dodge Corp. and Outokumpu American Brass, were reportedly owed significant sums at the time of the filing. In 2002, Superior TeleCom spun-off Essex Electric Co., which comprised its electrical wire business, to the Alpine Group. Alpine is a holding company that owns 49% of Superior TeleCom (Platts Metals Week, 2003).

On March 31, Grupo Mexico S.A. de C.V. announced that it had signed and received funding for a loan of \$200 million with a syndicate of banks led by J.P. Morgan-Chase & Co. and Bank of America Corp. This agreement substitutes for an earlier agreement with Barclay's PLC, which withdrew its participation. The funding allowed a conditional \$310 million loan agreement signed on February 28 with Banco Inbursa to be consumated. Effective with completion of the loan package, Grupo's Americas Mining Corp. acquired the 54% share of Southern Peru Copper Corp. owned by its subsidiary, ASARCO Incorporated. Asarco in turn, was relieved of all its short-term debt, \$550 million, or 77% of its overall debt, and improved its cash flow position (ASARCO Incorporated, 2003).

#### **References Cited**

ASARCO Incorporated, 2003, Grupo Mexico concludes financial restructuring of Asarco: Mexico City, ASARCO Incorporated press release, March 31, 1 p.

Platts Metals Week, 2003, Superior bankruptcy reflects sorry wire market: Platts Metals Week, v. 74, no. 10, March 10, p. 1, 12-13.

Superior TeleCom Inc., 2003, Superior TeleCom to reduce debt: East Rutherford, NJ, Superior TeleCom Inc. press release, March 3, 2 p.

# $\label{table 1} \textbf{TABLE 1}$ SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES $^1$

(Metric tons, unless otherwise specified)

				2003	
	Source				January -
	table <sup>2</sup>	2002 <sup>p</sup>	February	March	March
Production:					
Primary:	<del></del>				
Mine, recoverable	(2)	1,140,000 <sup>r</sup>	82,500 <sup>r</sup>	95,100	269,000
Refinery:	<del></del>				
Electrolytic:					
Domestic	(4)	801,000	60,500	60,700	191,000
Foreign	(4)	40,000 3	W	W	W
Electrowon	(4)	601,000 r	45,900 <sup>r</sup>	50,300	146,000
Total	(4)	1,440,000	106,000 <sup>r</sup>	111,000	337,000
Secondary recoverable copper:	<del></del>				
Refineries	(5)	69,900 <sup>r</sup>	3,910	5,670	14,100
Ingot makers <sup>4</sup>	(5)	122,000	10,200	10,200	30,500
Brass and wire-rod mills	(5)	735,000 <sup>r</sup>	55,400 <sup>r</sup>	55,300	175,000
Foundries, et. <sup>4</sup>	(5)	64,800	5,400	5,400	16,200
Smelter, total	(3)	683,000	42,300	35,700	132,000
Consumption:	<del></del>				
Apparent	(8)	2,610,000	257,000	NA	NA
Refined (reported)	(7)	2,370,000	195,000 <sup>r</sup>	191,000	575,000
Purchased copper-base scrap	(9)	1,260,000 r	95,100 <sup>r</sup>	97,000	300,000
Stocks at end of period:	<del></del>				
Total refined	(11)	1,030,000	938,000 <sup>r</sup>	936,000	XX
Blister, etc.	(11)	44,400	47,900	25,300	XX
Prices:					
U.S. producer cathode					
(cents per pound) <sup>5</sup>	(12)	75.805	81.121	79.875	80.175
Imports: <sup>6</sup>	<del></del>				
Ores and concentrates <sup>7</sup>	(14)	82,100 <sup>r</sup>	4,940	NA	NA
Refined	(14)	927,000	87,800	NA	NA
Exports: <sup>6</sup>	<del>_</del>				
Ores and concentrates <sup>7</sup>	(15)	23,000	989	NA	NA
Refined	(15)	26,600	766	NA	NA

Preliminary. Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; included in

<sup>&</sup>quot;Domestic." XX Not applicable.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

 $<sup>^2\</sup>mbox{Numbers}$  in parentheses refer to the significant tables where these data are located.

<sup>&</sup>lt;sup>3</sup>January-April only; excludes withheld data.

<sup>&</sup>lt;sup>4</sup>Monthly data and 2002 cumulative data estimated based on 2001 monthly average.

<sup>&</sup>lt;sup>5</sup>Source: Platts Metals Week.

<sup>&</sup>lt;sup>6</sup>Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>7</sup>Copper content.

 $\mbox{TABLE 2} \\ \mbox{MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES}^{1}$ 

## (Metric tons)

	Re	coverable copp	er	Contained copper			
Period	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total	
2002: <sup>p</sup>							
January - March	192,000 <sup>r</sup>	94,800 <sup>r</sup>	287,000 <sup>r</sup>	151,000 <sup>r</sup>	140,000	291,000 <sup>r</sup>	
March	66,700 <sup>r</sup>	35,200	102,000 <sup>r</sup>	52,000 <sup>r</sup>	51,200	103,000 <sup>r</sup>	
April	61,700 <sup>r</sup>	32,800	94,500 <sup>r</sup>	50,200 <sup>r</sup>	45,500	95,700 <sup>r</sup>	
May	67,500 <sup>r</sup>	29,900	97,400 <sup>r</sup>	51,300 <sup>r</sup>	47,500	98,800 <sup>r</sup>	
June	63,400 <sup>r</sup>	29,800	93,200 <sup>r</sup>	51,000 <sup>r</sup>	43,400	94,400 <sup>r</sup>	
July	63,600 <sup>r</sup>	29,700	93,300 <sup>r</sup>	50,900 <sup>r</sup>	43,400	94,300 <sup>r</sup>	
August	65,300 <sup>r</sup>	28,400	93,700 <sup>r</sup>	51,000 <sup>r</sup>	43,900	94,900 <sup>r</sup>	
September	62,700 r	34,500	97,200 <sup>r</sup>	48,900 r	49,700	98,500 <sup>r</sup>	
October	62,200 <sup>r</sup>	32,000	94,200 <sup>r</sup>	48,600 r	46,800	95,500 <sup>r</sup>	
November	62,500 <sup>r</sup>	32,800	95,300 <sup>r</sup>	47,100 <sup>r</sup>	49,400	96,500 <sup>r</sup>	
December	66,500 <sup>r</sup>	30,500	96,900 <sup>r</sup>	50,500 <sup>r</sup>	47,700	98,200 <sup>r</sup>	
Year	767,000 <sup>r</sup>	375,000	1,140,000 <sup>r</sup>	601,000 <sup>r</sup>	557,000	1,160,000 <sup>r</sup>	
2003:							
January	62,600 <sup>r</sup>	28,600	91,200 <sup>r</sup>	49,900 <sup>r</sup>	42,400	92,400 <sup>r</sup>	
February	55,800 <sup>r</sup>	26,700	82,500 <sup>r</sup>	45,900 <sup>r</sup>	37,600	83,500 <sup>r</sup>	
March	62,000	33,100	95,100	50,300	46,000	96,400	
January - March	180,000	88,400	269,000	146,000	126,000	272,000	

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 $\label{eq:table 3} \textbf{COPPER PRODUCED AT SMELTERS IN}$  THE UNITED STATES, BY SOURCE  $^{1,\,2}$ 

## (Metric tons, copper content)

	Anode
Period	production
2002: <sup>p</sup>	
January - March	176,000 <sup>r</sup>
March	61,900
April	60,400
May	62,200
June	55,400
July	50,400
August	50,300
September	54,400
October	59,800
November	57,500
December	56,500
Total	683,000
2003:	
January	54,200
February	42,300
March	35,700
January - March	132,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2</sup>$  Includes production from Alaska, Idaho, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>&</sup>lt;sup>3</sup>Includes copper content of precipitates and other metal concentrates.

<sup>&</sup>lt;sup>1</sup>Includes blister, anode and copper from primary or secondary sources.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

 ${\bf TABLE~4}$  PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY  $^1$ 

#### (Metric tons)

		Primary n	naterials			
	Electrolyticall	y refined <sup>2</sup>				Total
Period	Domestic	Foreign	Electrowon	Total	Scrap	refined
2002: <sup>p</sup>						
January - March <sup>r</sup>	180,000	29,700	151,000	361,000	15,700	376,000
March	55,900	10,700	52,000 <sup>r</sup>	119,000 <sup>r</sup>	6,430	125,000 1
April	62,300	10,300	50,200 <sup>r</sup>	123,000 <sup>r</sup>	7,200	130,000
May	76,100	W	51,300 <sup>r</sup>	127,000	7,590	135,000 1
June	70,000	W	51,000 <sup>r</sup>	121,000 <sup>r</sup>	7,090	128,000
July	74,100	W	50,900 <sup>r</sup>	125,000 <sup>r</sup>	5,500	130,000
August	67,600	W	51,000 r	119,000 <sup>r</sup>	5,880	124,000
September	66,100	W	48,900 r	115,000 <sup>r</sup>	4,820	120,000 1
October	73,100	W	48,600 r	122,000 <sup>r</sup>	7,120 <sup>r</sup>	129,000 1
November	67,900	W	47,100 <sup>r</sup>	115,000 <sup>r</sup>	5,120 <sup>r</sup>	120,000 1
December	64,600	W	50,500 <sup>r</sup>	115,000 <sup>r</sup>	3,930	119,000 1
Year	801,000	$40,000^{-3}$	601,000 <sup>r</sup>	1,440,000 <sup>r</sup>	70,000 <sup>r</sup>	1,510,000
2003:						
January	69,800	W	49,900 <sup>r</sup>	120,000 <sup>r</sup>	4,500 <sup>r</sup>	124,000
February	60,500	W	45,900 <sup>r</sup>	106,000 <sup>r</sup>	3,910	110,000
March	60,700	W	50,300	111,000	5,670	117,000
January - March	191,000	W	146,000	337,000	14,100	351,000

Preliminary. Revised. W Withheld to avoid disclosing company proprietary data; included in "Domestic."

 ${\it TABLE~5}$  COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP  $^1$ 

#### (Metric tons, copper content)

	Refine	eries <sup>2</sup>	Ingot m	akers <sup>3</sup>	Brass and wire-rod mills		Foundries, etc. <sup>3</sup>		
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>4</sup>
2002: <sup>p</sup>									
January - March	9,390 <sup>r</sup>	6,340 <sup>r</sup>	6,940 <sup>r</sup>	23,600 <sup>r</sup>	176,000 <sup>r</sup>	5,380	5,940 <sup>r</sup>	10,300 <sup>r</sup>	244,000 r
March	2,910	3,520	2,310	7,850	60,900 <sup>r</sup>	1,770	1,980	3,420	84,700 <sup>r</sup>
April	3,330	3,860	2,310	7,850	59,500 <sup>r</sup>	904	1,980	3,420	83,200 <sup>r</sup>
May	3,740	3,850	2,310	7,850	60,400 <sup>r</sup>	1,840	1,980	3,420	85,400 <sup>r</sup>
June	3,430	3,650	2,310	7,850	65,600 <sup>r</sup>	1,780	1,980	3,420	90,100 <sup>r</sup>
July	2,810	2,690	2,310	7,850	61,000 <sup>r</sup>	1,720	1,980	3,420	83,800 <sup>r</sup>
August	3,400	2,480	2,310	7,850	64,300 <sup>r</sup>	1,570	1,980	3,420	87,300 <sup>r</sup>
September	2,940	1,870	2,310	7,850	63,800 r	1,190	1,980	3,420	85,400 <sup>r</sup>
October	3,390 <sup>r</sup>	3,720	2,310	7,850	54,100 <sup>r</sup>	1,080	1,980	3,420	77,900 <sup>r</sup>
November	2,110 <sup>r</sup>	3,010	2,310	7,850	54,500 <sup>r</sup>	2,110	1,980	3,420	77,300 <sup>r</sup>
December	1,980	1,950	2,310	7,850	56,900 r	1,110	1,980	3,420	77,500 <sup>r</sup>
Year	36,500 <sup>r</sup>	33,400	27,800	94,200	717,000 <sup>r</sup>	18,700	23,700	41,100	992,000 <sup>r</sup>
2003:									
January	1,410	3,080 <sup>r</sup>	2,310	7,850	63,100 <sup>r</sup>	1,470	1,980	3,420	84,600 <sup>r</sup>
February	1,210	2,700	2,310	7,850	54,100 <sup>r</sup>	1,270	1,980	3,420	74,800 <sup>r</sup>
March	1,340	4,340	2,310	7,850	54,600	732	1,980	3,420	76,600
January - March	3,960	10,100	6,940	23,600	172,000	3,460	5,940	10,300	236,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Based on source of material at smelter level.

<sup>&</sup>lt;sup>3</sup>January-April only; excludes withheld data.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Electrolytically refined and fire-refined scrap based on source of material at smelter level.

<sup>&</sup>lt;sup>3</sup>Monthly data and 2002 cumulative data estimated based on 2001 annual data.

<sup>&</sup>lt;sup>4</sup>Does not include an estimate, based on reported 2001 data of 3,190 tons per month from new scrap and 2,010 tons per month copper recovered from scrap other than copper-base.

 ${\bf TABLE~6} \\ {\bf PRODUCTION, SHIPMENTS, AND~STOCKS~OF~BRASS~AND~WIRE-ROD~SEMIFABRICATES}^1 \\ {\bf TABLE~6} \\ {\bf PRODUCTION, SHIPMENTS, AND~STOCKS~OF~BRASS~AND~WIRE-ROD~SEMIFABRICATES}^1 \\ {\bf PRODUCTION~STOCKS~OF~BRASS~AND~WIRE-ROD~SEMIFABRICATES}^1 \\ {\bf PRODUCTION~STOCKS~OF~BRASS~AND~WIRE-ROD~SEMIFABRICATES}^1 \\ {\bf PRODUCTION~STOCKS~OF~BRASS~AND~WIRE-ROD~SEMIFABRICATES}^2 \\ {\bf PRODUCTION~STOCKS~AND~STOCK$ 

(Metric tons, gross weight)

	Prod	luction	Ship	ments	Stocks, e	end of period
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2002: <sup>p</sup>						
January - March <sup>r</sup>	364,000	433,000	368,000	422,000	XX	XX
March	127,000	148,000	126,000 <sup>r</sup>	145,000	47,400	38,800
April	127,000	155,000	127,000	157,000	47,400	36,400
May	127,000	155,000	128,000	158,000	46,700	33,000
June	130,000	139,000	129,000 <sup>r</sup>	143,000	50,500	28,500
July	119,000	144,000	120,000	147,000	50,000	25,400
August	128,000 <sup>r</sup>	148,000	128,000	152,000	50,400	21,500
September	124,000 <sup>r</sup>	145,000	122,000	148,000	53,200	18,600
October	127,000	158,000	125,000	155,000	55,800	20,900
November	114,000	138,000	116,000	129,000	53,400	28,900
December	106,000	108,000	103,000	108,000	56,200	29,000
Year	1,470,000	1,720,000	1,460,000 <sup>r</sup>	1,720,000	XX	XX
2003:						
January	119,000 <sup>r</sup>	140,000	120,000 r	139,000	55,200	29,500 <sup>r</sup>
February	111,000 <sup>r</sup>	133,000	110,000 <sup>r</sup>	132,000	55,600	30,200 <sup>r</sup>
March	117,000	134,000	117,000	129,000	55,600	35,400
January - March	347,000	406,000	348,000	400,000	XX	XX

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

 $\label{eq:table 7} \textbf{TABLE 7}$  CONSUMPTION OF REFINED COPPER  $^1$ 

(Metric tons)

	Wire-rod	Brass	Other	
Period and item	mills	mills	plants <sup>2</sup>	Total
2002: <sup>p</sup>				
January - March	422,000 <sup>r</sup>	148,000	14,900 <sup>r</sup>	585,000 <sup>r</sup>
March	146,000	51,500	4,950	202,000
April	153,000	51,700	4,950	210,000
May	152,000	55,500	4,950	213,000
June	138,000	54,700	4,950	198,000
July	142,000	49,300	4,950	197,000
August	152,000	51,400	4,950	209,000
September	143,000	50,900	4,950	199,000
October	151,000	50,200	4,950	206,000
November	142,000	46,300	4,950	193,000
December	113,000	40,600	4,950	159,000
Year	1,710,000 <sup>r</sup>	599,000 r	59,400	2,370,000
2003:	-			
January	137,000	47,200	4,950	189,000
February	140,000	49,500	4,950	195,000 <sup>r</sup>
March:	-			
Cathodes	137,000	35,000	1,140	173,000
Wire bars			(3)	(3)
Ingots and ingot bars	<del></del>	1,450	1,690	3,140
Cakes and slabs		(3)	(3)	(3)
Billets and other	W	12,700	2,120	14,800
Total	137,000	49,200	4,950	191,000
January - March	414,000	146,000	14,900	575,000

 $<sup>\</sup>overline{}^p\text{Preliminary.}\ ^r\text{Revised.}\ W$  Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not added to totals shown.

 $<sup>^2</sup>$ Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2001 annual data.

<sup>&</sup>lt;sup>3</sup>Withheld to avoid disclosing company proprietary data; included with "Billets and others."

 $\label{eq:table 8} \textbf{U.S.} \ \textbf{APPARENT CONSUMPTION OF COPPER}^1$ 

#### (Metric tons)

	Refined copper	Copper in	Refined general	Refined	Stock change	Apparent
Period	production	old scrap <sup>2</sup>	imports <sup>3</sup>	exports <sup>3</sup>	during period	consumption
2002: <sup>p</sup>						
January - February	242,000 <sup>r</sup>	33,100 <sup>r</sup>	247,000	1,090	87,900 <sup>r</sup>	433,000 <sup>r</sup>
March	119,000 <sup>r</sup>	18,600	64,300	3,150	20,100	178,000 <sup>r</sup>
April	123,000 <sup>r</sup>	18,100	105,000	652	16,900	229,000 r
May	127,000	19,000	70,200	814	(15,000)	231,000
June	121,000 <sup>r</sup>	18,700	79,500	6,770	(33,900)	246,000 <sup>r</sup>
July	125,000 <sup>r</sup>	17,700	83,500	7,690	13,500	205,000 <sup>r</sup>
August	119,000 <sup>r</sup>	17,400	98,200	2,550	(7,350)	239,000 <sup>r</sup>
September	115,000 <sup>r</sup>	16,400	64,000	1,320	(4,620)	199,000 <sup>r</sup>
October	122,000 <sup>r</sup>	18,100	91,500	606	(14,300)	245,000 <sup>r</sup>
November	115,000 <sup>r</sup>	18,400	74,900	506	6,190	202,000 r
December	115,000 <sup>r</sup>	16,400	83,000	1,460	4,580	208,000 r
Year	1,440,000 <sup>r</sup>	212,000	1,060,000	26,600	73,900	2,610,000
2003:						
January	120,000 <sup>r</sup>	17,900 <sup>r</sup>	61,500	2,540	(23,300)	220,000 <sup>r</sup>
February	106,000 <sup>r</sup>	17,300	64,700	766	(69,200) <sup>r</sup>	257,000
March	111,000	18,400	NA	NA	(1,390)	NA
January - February	226,000	35,100	126,000	3,310	(92,500)	477,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

 ${\bf TABLE~9} \\ {\bf CONSUMPTION~OF~PURCHASED~COPPER-BASE~SCRAP}^{1}$ 

## (Metric tons, gross weight)

	Smelt	ters			Brass	and			
	and refineries		Ingot makers <sup>2</sup>		wire-rod	wire-rod mills <sup>3</sup>		Foundries, etc. <sup>2</sup>	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	used
2002: <sup>p</sup>									
January - March	8,750 <sup>r</sup>	6,590 <sup>r</sup>	11,100 <sup>r</sup>	32,600 <sup>r</sup>	225,000 <sup>r</sup>	5,540	10,500 <sup>r</sup>	11,100 <sup>r</sup>	312,000 <sup>r</sup>
March	2,940	3,740	3,690	10,900	77,700 <sup>r</sup>	1,830	3,500	3,700	108,000 r
April	3,370	4,120	3,690	10,900	75,600 <sup>r</sup>	951	3,500	3,700	106,000 <sup>r</sup>
May	3,800	4,060	3,690	10,900	76,800 <sup>r</sup>	1,900	3,500	3,700	108,000 <sup>r</sup>
June	3,470	3,970	3,690	10,900	83,500 <sup>r</sup>	1,840	3,500	3,700	115,000
July	2,840	2,900	3,690	10,900	77,900 <sup>r</sup>	1,770	3,500	3,700	107,000 <sup>r</sup>
August	3,450	2,580	3,690	10,900	81,300 °	1,630	3,500	3,700	111,000
September	3,000	1,960	3,690	10,900	81,500 <sup>r</sup>	1,250	3,500	3,700	110,000
October	3,450 <sup>r</sup>	2,490	3,690	10,900	69,100 <sup>r</sup>	1,130	3,500	3,700	98,000 <sup>r</sup>
November	2,130 <sup>r</sup>	3,270	3,690	10,900	68,600 r	2,160	3,500	3,700	97,900 <sup>r</sup>
December	2,100	1,990	3,690	10,900	71,900 <sup>r</sup>	1,160	3,500	3,700	98,900 r
Year	36,400 <sup>r</sup>	33,900	44,300	131,000	912,000 <sup>r</sup>	19,300	42,000	44,400	1,260,000 r
2003:									
January	1,430	3,130 <sup>r</sup>	3,690	10,900	79,800 <sup>r</sup>	1,510	3,500	3,700	108,000
February	1,230	2,730	3,690	10,900	68,000 <sup>r</sup>	1,320	3,500	3,700	95,100 <sup>r</sup>
March	1,350	4,000	3,690	10,900	69,100	781	3,500	3,700	97,000
January - March	4,000	9,850	11,100	32,600	217,000	3,610	10,500	11,100	300,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes reported monthly production of copper from old scrap of copper-base, an estimate for an average of copper from non-copper-base materials based on 2001 data.

<sup>&</sup>lt;sup>3</sup>Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2</sup>$ Monthly data and 2002 cumulative data estimated from 2001 annual data.

<sup>&</sup>lt;sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

# $\label{eq:table 10} \textbf{CONSUMPTION OF PURCHASED COPPER-BASE SCRAP}^{1,\,2}$

(Metric tons, gross weight)

	2002 <sup>p</sup>				2003	
Scrap type and processor	January - March	Year	January	February	March	January - March
No. 1 wire and heavy:						
Smelters and refiners	17,800 <sup>r</sup>	73,800	5,990	5,490	5,790	17,300
Brass and wire-rod mills	93,500 <sup>r</sup>	379,000	34,400 r	29,500 <sup>r</sup>	28,600	92,600
No. 2 mixed heavy and light:						
Smelters and refiners	9,130 <sup>r</sup>	43,000	2,450 °	2,350	3,430	8,230
Brass and wire-rod mills	1,490 <sup>r</sup>	6,630	738	590	749	2,080
Total unalloyed scrap:						
Smelters and refiners	27,000 <sup>r</sup>	117,000	8,430 °	7,840	9,220	25,500
Brass and wire-rod mills	94,900 <sup>r</sup>	386,000 r	35,200 <sup>r</sup>	30,100 <sup>r</sup>	29,400	94,600
Red brass: <sup>3</sup>						
All plants	12,800 <sup>r</sup>	52,900	4,200	4,390	4,360	12,900
Leaded yellow brass:						
All plants	86,400 <sup>r</sup>	340,000 r	28,400 r	27,200 <sup>r</sup>	29,000	84,600
Yellow and low brass:						
All plants	27,000 <sup>r</sup>	104,000	9,420	3,200	3,360	16,000
Cartridge cases and brass:						
Smelters and refiners	W	W	W	W	W	W
Brass mills	13,300 <sup>r</sup>	70,300	7,390	7,280	6,910	21,600
Auto radiators:						
Smelters and refiners	10,400 <sup>r</sup>	41,600	3,470	3,470	3,470	10,400
Bronzes:						
Smelters and refiners	2,950 <sup>r</sup>	11,800	983	983	983	2,950
Brass mills	3,170 <sup>r</sup>	12,600	531	492	455	1,480
Nickel-copper alloys:						
All plants	4,900 <sup>r</sup>	15,300	753	831	849	2,430
Low grade and residues:						
Smelters and refiners	3,470 <sup>r</sup>	13,900	1,160	1,160	1,160	3,470
Other alloy scrap: <sup>4</sup>						
Smelters and refiners <sup>5</sup>	582 <sup>r</sup>	2,330	194	194	194	582
Brass mills	1,710 <sup>r</sup>	6,980	429	714	543	1,690
Total alloyed scrap:						
Smelters and refiners	32,100 <sup>r</sup>	128,000	10,700	10,700	10,700	32,100
Brass mills	135,000 <sup>r</sup>	544,000 <sup>r</sup>	46,200 <sup>r</sup>	39,200 <sup>r</sup>	40,600	126,000
Total scrap:						
Smelters and refiners	59,100 <sup>r</sup>	245,000	19,100 <sup>r</sup>	18,500	19,900	57,600
Brass and wire-rod mills	230,000 <sup>r</sup>	930,000 <sup>r</sup>	81,300 <sup>r</sup>	69,400 <sup>r</sup>	69,900	221,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap: Smelters and refiners."

<sup>&</sup>lt;sup>1</sup>Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,230 tons of scrap per month in 2001; monthly data include estimates of about 14,600 tons of scrap per month consumed by ingot makers and several smelters that report on an annual basis.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>3</sup>Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

<sup>&</sup>lt;sup>4</sup>Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

<sup>&</sup>lt;sup>5</sup>Includes items indicated by symbol W.

## $\label{eq:table 11} \text{COPPER STOCKS AT END OF PERIOD}^1$

#### (Metric tons)

				R	Refined copper			
	Crude		Wire-rod					Total
Period	copper <sup>2</sup>	Refineries <sup>3</sup>	mills <sup>3</sup>	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex <sup>5</sup>	$LME^6$	refined
2002: <sup>p</sup>								
March	95,800	22,100	24,200	26,300	3,600	284,000	704,000	1,060,000
April	90,100	17,400	31,900	25,700	3,600	296,000	707,000	1,080,000
May	91,900	16,100	26,800	24,900	3,600	304,000	691,000	1,070,000
June	88,700	16,500	20,700	23,200	3,600	322,000	646,000	1,030,000
July	101,000	15,500	25,500	27,500	3,600	338,000	636,000	1,050,000
August	81,500	12,100	24,600	28,800	3,600	341,000	628,000	1,040,000
September	76,700	11,600	27,100	26,600	3,600	344,000	621,000	1,030,000
October	76,500	10,600	29,300	22,600	3,600	346,000	607,000	1,020,000
November	76,300	14,400	21,200	32,700	3,600	347,000	607,000	1,030,000
December	44,400	11,700	23,000	28,700	3,600	362,000	601,000	1,030,000
2003:								
January	45,100	6,300	37,900	29,700	3,600	360,000	570,000	1,010,000
February	47,900	3,720 <sup>r</sup>	23,000	23,600	3,600	340,000	544,000	938,000
March	25,300	5,270	29,700	22,700	3,600	330,000	545,000	936,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

TABLE 12 AVERAGE PRICE OF COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

## (Cents per pound)

	U.S. producers	Comex	LME	
	delivered price	first	cash price	
Period	cathode1	position <sup>2</sup>	Grade A	
2002:		-		
March	78.683	74.525	72.779	
April	76.966	73.107	72.118	
May	77.378	73.220	72.362	
June	80.386	76.228	74.715	
July	76.487	72.329	72.082	
August	71.981	67.823	67.097	
September	71.863	67.705	67.057	
October	72.319	68.161	67.286	
November	76.729	72.571	71.758	
December	76.541	72.383	72.365	
Year	75.805	71.672	70.721	
2003:				
January	79.529	75.371	74.722	
February	81.121	76.963	76.360	
March	79.875	75.717	75.234	
January - March	80.175	76.017	75.439	

<sup>&</sup>lt;sup>1</sup>Listed as "U.S. producer cathode."

Sources: Platts Metals Week and American Metal Market.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Copper content of blister and other materials in transit and in process of refining.

<sup>&</sup>lt;sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>&</sup>lt;sup>4</sup>Monthly estimates based on reported and 2001 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>&</sup>lt;sup>5</sup>Commodity Exchange Inc., New York.

<sup>&</sup>lt;sup>6</sup>London Metal Exchange Ltd., U.S. warehouses.

<sup>&</sup>lt;sup>2</sup>Listed as "Comex high grade first position."

 ${\it TABLE~13}$  NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

			Dealers ( New York )			
		•		Red brass		
	Brass mills	Refiners	No. 2	turnings and		
Month	No. 1 scrap	No. 2 scrap	Scrap	borings		
2002:						
March	72.19	59.62	43.71	37.00		
April	71.82	58.80	44.00	37.00		
May	71.98	60.39	44.00	37.00		
June	74.78	71.38	44.00	37.00		
July	71.91	60.59	44.00	37.00		
August	66.89	55.66	42.27	37.00		
September	66.80	55.68	40.80	37.00		
October	66.83	56.70	39.09	37.00		
November	71.38	60.50	41.00	37.00		
December	71.60	61.31	41.00	37.00		
Year	70.23	59.45	42.36	37.00		
2003:						
January	73.67	62.38	46.90	37.33		
February	75.55	63.95	52.00	38.00		
March	74.69	64.26	52.00	38.00		
January - March	74.64	63.53	50.30	37.78		

Source: American Metal Market.

 ${\it TABLE~14}$  U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY  ${\it CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash and precipitates			Bli	ster and ano	des	Refined		
		2003			2003			2003			2003	
Country or		January -			January -		•	January -				January -
territory	2002	February	February	2002	February	February	2002	February	February	2002	February	February
Brazil										45,000	2,010	2,010
Canada	8,350			75	28	28	83,700	6,150	14,600	235,000	15,100	33,800
Chile	62,000 <sup>r</sup>	4,940	4,940				37,400	3,240	7,720	245,000	44,400	61,100
China				(2)	1	1				61		
Germany						41	(2)			3,260	151	170
Indonesia	2,910											
Japan				2			(2)			8,640	687	1,180
Malaysia				17		2						
Mexico	4			324	70	120	16,200	1,140	2,210	57,200	1,970	3,500
Namibia							6,340		3,570			
Peru	5,960						4,730			288,000	22,100	42,900
Russia										28,800		
Taiwan	17			621	8	68				10		
United Kingdom							2	(2)	(2)	3,410	1,410	3,620
Other	2,910 <sup>r</sup>			r			70			13,300 <sup>r</sup>	1	281
Total	82,100 <sup>r</sup>	4,940	4,940	1,040	107	260	148,000	10,500	28,100	927,000	87,800	149,000

<sup>&</sup>lt;sup>r</sup>Revised. -- Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.

 ${\it TABLE~15}$  U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY  ${\it CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash and precipitates			Bli	ster and anode	es		Refined		
		2003			2003			2003			20	03	
Country or			January -			January -			January -			January -	
territory	2002	February	February	2002	February	February	2002	February	February	2002	February	February	
Australia	21			5			77		8	1,650			
Canada	17,500	653	1,740	2,560	80	109	17,700	1,340	2,800	3,130	249	458	
Cayman Islands											23	23	
China	1,110	3	29	63	7	10	515	40	162	14,900	243	1,160	
Colombia	1				20	20	33	3	6	14	3	10	
Egypt										2,200			
France				2		2	120			42	11	29	
Germany	28			85			241		40	79	10	36	
Hong Kong	25		2	160			2,600	218	395	38	(2)	4	
India	9			153			83		24	825	60	397	
Japan	36	44	55	1,330		2	40	60	80	48	2	2	
Korea, Republic of	197			40		2	707	33	83	524	21	96	
Mexico	2,620	62	121	12,400	816	2,400	38			135	106	1,050	
Netherlands	38			35		1	1,100			16			
New Caledonia								20	20				
Peru	1,230	214	214	39									
Philippines				3			5,880			3	20	20	
Singapore	60			(2)			614	20	63	7	6	10	
Spain				4	(2)	(2)	259	40	80	6			
Taiwan	80			104			1,000	160	259	1,630			
United Kingdom	16	4	4	65	20	28	469	39	78	527			
Other	95 <sup>r</sup>	9	43	85 <sup>r</sup>	3	8	1,420 °	51	112	802 <sup>r</sup>	12	15	
Total	23,000	989	2,210	17,100	946	2,580	32,900	2,020	4,210	26,600	766	3,310	

<sup>&</sup>lt;sup>r</sup>Revised. -- Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.

TABLE 16 U.S. COPPER SCRAP TRADE<sup>1</sup>

(Metric tons, gross weight)

			Impor	rts		Exports						
	Unalloyed			Alloyed			Unalloyed			Alloyed		
		2003			2003			2003			200	03
Country or			January -		January -				January -			January -
territory	2002	February	February	2002	February	February	2002	February	February	2002	February	February
Barbados	229	15	73	18								
Belgium							2,210	288	510	7,050	344	625
Canada	13,900	639	1,230	38,700	3,200	6,070	20,100	1,550	3,190	19,900	1,360	2,850
Chile	611	18	18	78			144			66		
China				547		72	122,000	16,900	32,300	155,000	15,000	29,200
Costa Rica	1,100	92	142	458	45	60				2	3	6
Dominican Republic	1,360	114	199	884	120	154						
France				117	6	16	1,830			2,450	500	608
Germany	118			1,110	240	263	14,200	1,630	1,880	16,400	655	1,370
Guatemala	536	39	96	1,190	85	163				(2)		
Honduras	399	15	83	347	30	47						
Hong Kong	3						7,180	116	233	6,140	479	938
India				(2)			3,920	290	639	43,500	2,880	6,130
Jamaica	362	35	123	239	9	14						
Japan	97	6	17	193	47	84	11,000	726	1,630	9,120	1,280	2,030
Korea, Republic of	19			40	3	14	14,900	3,160	3,920	18,700	1,640	3,320
Malaysia				264	10	15		330	384	243		18
Mexico	9,250	713	1,350	18,300	1,200	2,380	2,280	224	309	248	303	321
Nicaragua	321	25	65	170	11	22						
Panama	173			792	94	166				79		
Switzerland				207			235	495	557	1,330		
Taiwan	15			389	39	109	10,100	1,120	1,980	9,060	962	1,580
Trinidad and Tobago	190	5	39	103	4	20						
United Kingdom	155	38	67	1,760	39	127	17			1,380	61	83
Venezuela	93			2,090	125	125						
Other	307 <sup>r</sup>	22	48	2,850 <sup>r</sup>	231	377	2,610 <sup>r</sup>	95	340	6,980 <sup>r</sup>	553	1,080
Total	29,300	1,780	3,540	70,900	5,540	10,300	213,000	26,900	47,900	298,000	26,000	50,100

Revised. -- Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.